



Science Advisory Board

CLIMATE WORKING GROUP

Climate and Global Change Postdoctoral Fellowship Program: Review Panel Recommendations

Joellen Russell: University of Arizona; Review Panel Chair
NOAA Science Advisory Board Meeting
February 27, 2018



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BACKGROUND

The History of the Program

In 1990, J. Michael Hall, then director of NOAA's Office of Global Programs envisioned the NOAA Climate and Global Change postdoctoral program and invited UCAR to partner in managing the program. The overall goal has always been to provide predictions and assessments of global climate change on seasonal to centennial time scales.



Ben Lee, Class 22



William D'Andrea, Class 18



Seeta Sistla, Class 23



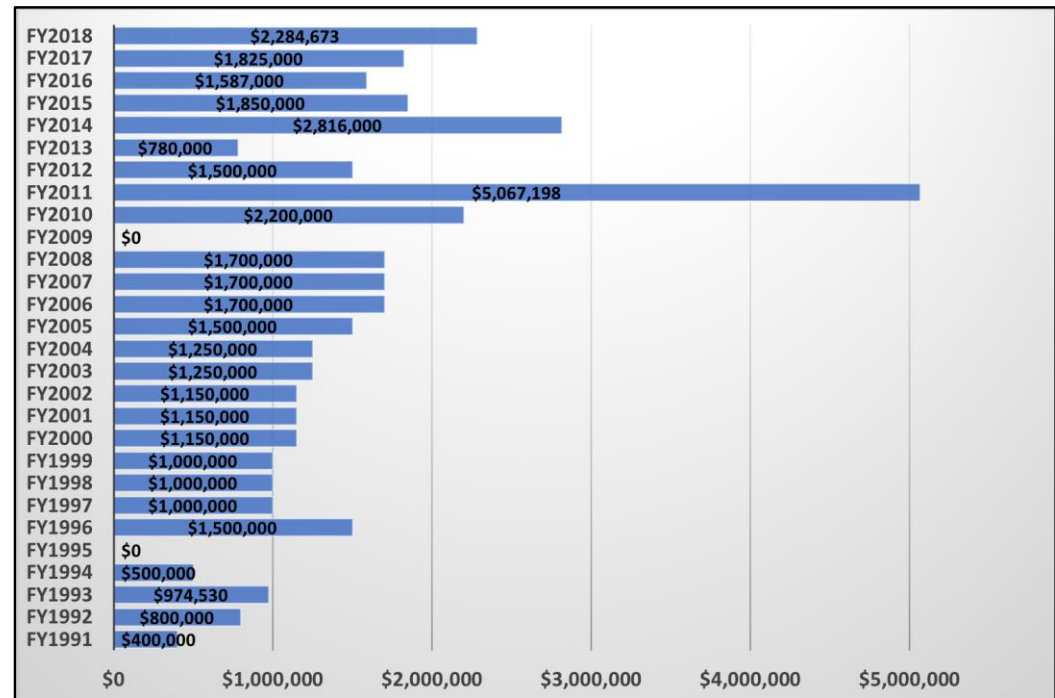
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BACKGROUND

The Program Today

Like many federal programs, the C&GC Postdoctoral Program is facing increasingly tighter budget constraints. Over the past two years, the NOAA Climate Program Office (CPO), in light of Executive Branch budget proposals calling for significant cuts in the “climate competitive research” budget line, was only able to fund four instead of the more-recently-typical eight postdocs.



C&GC Funding History



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C&GC REVIEW PANEL

The Review Panel

In this context, CPO requested a review of CPO's C&GC Postdoctoral program, with subsequent recommendations to the NOAA Science Advisory Board (SAB).

A panel composed of a diverse field of experts in climate and global change met on October 5, 2018 to hear reports on the history and the status of the Climate & Global Change (C&GC) Program and to make recommendations.

NOAA Climate & Global Change Postdoctoral Fellowship Program Review

Welcome

NOAA Climate and Global Change Postdoctoral Fellowship Program Review

October 5, 2018

Chair: Joellen Russell
Members: Louisa Koch | Ruby Leung | David Battisti





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C&GC REVIEW PANEL

The Review Panel



Joellen Russell is the Thomas R. Brown Chair of Integrative Science and an Associate Professor in the Department of Geosciences at the University of Arizona



Louisa Koch is the Director of Education at the National Oceanic and Atmospheric Administration (NOAA)



David Battisti is The Tamaki Endowed Chair of Atmospheric Sciences at the University of Washington and a fellow at the American Geophysical Union



Ruby Leung is a Battelle Fellow at Pacific Northwest National Laboratory and an Affiliate Scientist at National Center for Atmospheric Research.



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C&GC REVIEW PANEL

Review Panel Charge

The Review Panel addressed two charges:

1) The communication of the Program's effectiveness and impact to date



2) Potential alternate funding options that NOAA could consider to maintain the long-term viability of the Program





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FINDINGS

The Review Panel Findings

- 1. Excellent program.** This excellent Program promotes NOAA's mission and prestige both nationally and internationally, as demonstrated by Fellow and Alumni scientific achievements, citations, innovations, prestigious appointments, and leadership roles.
- 2. Serving the nation and society.** In service to the nation and society, the Program supports improving and expanding prediction within the earth system; combining observation and modeling; developing new tools and techniques and identifying and quantifying new interactions in weather, water and climate; and enabling nationwide communication of resilience and adaptation strategies.
- 3. Fostering and developing the next generation.** The Program fosters and develops the next generation of earth system and climate science leaders by supporting independent scientists and emerging leaders who build the new and transformational tools, technologies, understanding, and innovations.
- 4. Building the nimble and interdisciplinary community.** The Program builds the nimble and interdisciplinary community required to address emerging issues in weather, water, and climate.



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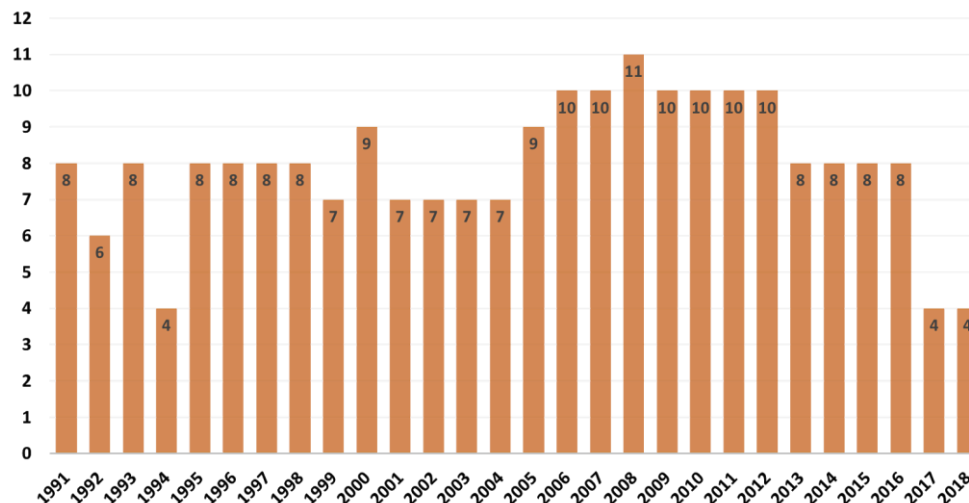
RECOMMENDATIONS

Review Panel Recommendations

1. Funding at least ten postdoctoral fellows per cohort. The Program is

compromised by any cohort with fewer than ten (10) postdoctoral Fellows. The Program selects for excellence across a broad range of disciplines that are essential to addressing emergent and inherently interdisciplinary areas of national need and opportunity, much like an

index fund. Addressing the urgent diversity of topics and approaches (more than ten relevant, distinct, and essential disciplines) is only possible with a broader group of postdoctoral Fellows. In addition, at least ten fellows per year would allow for the development of a diversely-trained cohort of leaders to address the nation's urgent emerging needs in climate and global change science.



Total Number of C&GC Fellows: 226
Average Number of Fellows Per Year: 8



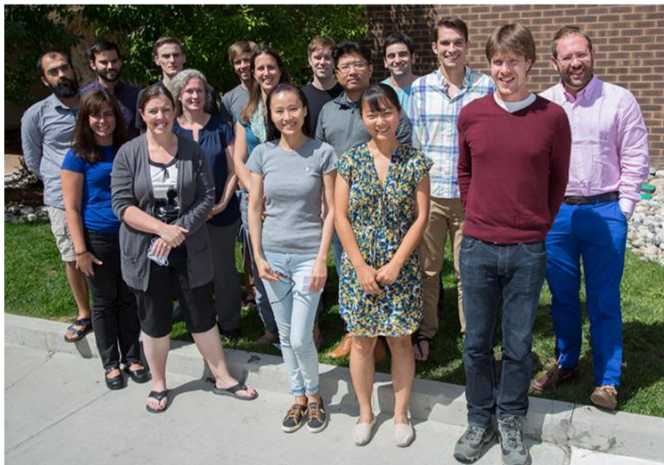
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RECOMMENDATIONS

Review Panel Recommendations

2. Improving Fellow interaction with NOAA. Improving fellow interaction with NOAA supports research coherence now and builds networks of contacts and knowledge for later. Fellow interaction with NOAA might include attending a lab review; visiting or giving a talk at NOAA headquarters; or joining NOAA scientists at the AGU [American Geophysical Union] lunch or at the Biannual Summer Institute.



2016 Summer Institute



1994 Summer Institute



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RECOMMENDATIONS

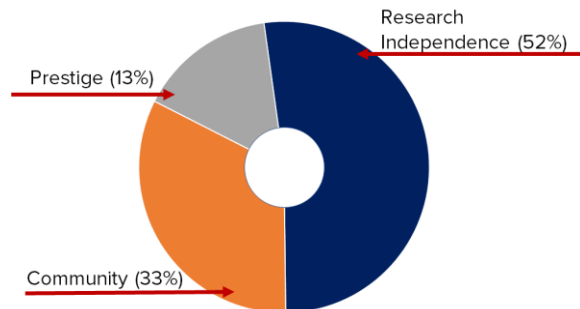
Review Panel Recommendations

3. Enhancing diversity and inclusion. Improving diversity and inclusion relative to the Fellows themselves and the host institutions is critical to advancing the field. Enhanced diversity and inclusion might be achieved by enhancing the language on the website and advertisements for Fellows, hosts, and host institutions. Similarly, when considering both hosts and applicants, best practices must be incorporated to encourage inclusive and diverse candidates.

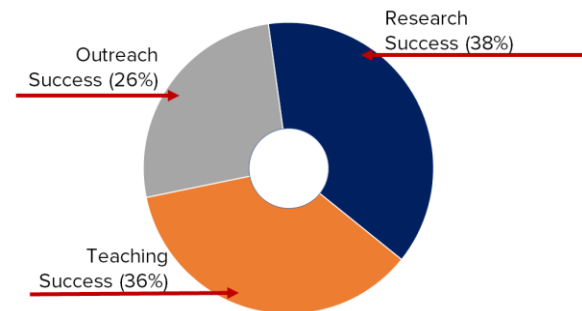


Review Panel Recommendations

4. Incorporating ongoing and well-maintained metrics. Measuring the Program is key to understanding and demonstrating the success and excellence of the Program. Metrics might include an aggregated h-index; career progression statistics (narrative of positions and time); grant funding (amounts and counts); early-career grants (amounts and counts); award and medal (count); Ph.D. students (count); other postdoctoral fellowships awarded (count); service to NOAA (narrative); use of NOAA data and resources (narrative); and Fellows hosted by joint institutes, NOAA employees, and cooperative institutes (count).



How did the NOAA C&GC Postdoctoral Fellowship enable your career success?



Briefly describe two successes you have achieved in your career as a result of the NOAA C&GC Postdoctoral Fellowship?



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RECOMMENDATIONS

Review Panel Recommendations

5. A note about alternate funding. Review Panel Members declined to comment on alternate funding for the Program, noting that they would not presume to direct NOAA's funding sources and choices. However, Review Panel Members did identify four criteria for satisfaction relative to alternate funding strategies: (1) The Program requires a single home and point of coordination that serves the Fellows, the hosts, the host institutions, and the overall research. (2) The Program requires overarching accountability, which the Climate Program Office has expertly provided for decades. (3) To preserve the independence, leadership, and innovation of the Fellows, consideration of split-funding with specific already-funded projects should be precluded; however, other funding sources that are contributing without expectation or agenda could be considered. (4) NOAA must be entrepreneurial in approach to simultaneously honor the promise of the past and the purpose for the future.



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DISCUSSION

Discussion/Decision

Are there any questions, comments, or concerns to the findings or recommendations?



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The Climate Working Group Subcommittee Response to the External Review Report of the NOAA Climate and Global Change Postdoctoral Program

The Climate Working Group Subcommittee Members were pleased to read the Review Panel's report on the NOAA Climate and Global Change Postdoctoral Program. Given the history of the program and the prestige of the Fellows funded to date, this Subcommittee reaffirms the importance of the Program's mission and prestige.

Relative to the individual findings of the Review Panel Members, the Subcommittee Members agreed with each, noting:

- 1. An excellent program.** Agreed, as presented. This is an excellent Program that promotes NOAA's mission and prestige both nationally and internationally.
- 2. Serving the nation and society.** Agreed, as presented. Because this is a critical component of the Programs' mission, the Subcommittee acknowledges the Review Panel for identifying and reporting the many ways in which this Program serves our nation and society.
- 3. Fostering and developing the next generation.** Agreed, as presented. This also is an important component of the Program's mission because the next generation of earth system and climate science leaders are much-needed in the research community.
- 4. Building the nimble and interdisciplinary community.** Agreed, as presented. The Subcommittee notes the importance of distinguishing this point from the previous point and acknowledges the research nexus around weather, water, and climate.

Relative to the recommendations of the Review Panel Members, the Subcommittee Members agreed with each, noting:

- 1. Funding at least ten postdoctoral fellows per cohort.** Agreed, as presented, although competing demands and short budgetary cycles are ongoing constraints.
- 2. Improving fellow interaction with NOAA.** Agreed, as presented. In particular, the Subcommittee requests that the Program ask each fellow to complete at least one of the following activities per fellowship: attending a lab review; visiting or giving a talk at NOAA Headquarters; or joining NOAA scientists at the AGU [American Geophysical Union] lunch or Summer Institute.
- 3. Enhancing diversity and inclusion.** Agreed, as presented. In particular, the Subcommittee requests that the Program immediately enhance the language on the website and advertisements for fellows, hosts, and host institutions. Similarly, the Subcommittee asks that the Program incorporate best practices that encourage inclusive and diverse candidates.



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THANK YOU!